

AGRICULTURE,  
FOOD, & NATURAL  
RESOURCES EDITION

# PATHWAYS TO SUCCESS

An education- and career-planning  
guide for South Carolina students



South Carolina  
Department of Education

Together, we can.

Personal  
Pathways



to success™

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SOUTH CAROLINA  
Center for Educator Recruitment, Retention, & Advancement





## Dear South Carolina Student,

“What do you want to be when you grow up?” You’ve heard it again and again, and if you’re like most people in school, you probably feel pretty lost. However, knowing what appeals to you or, better yet, what you want to do, can help you focus on those subjects and activities that will prepare you for the future.

But with so much to think about in life right now, and so many career directions to choose from, choosing a career pathway can be overwhelming. Even worse, what if you were to decide and then change your mind?

How would you like to know more about your options? This guide offers you realistic insight into various career clusters and how they might fit into the way you think and feel.

*Pathways to Success* can help you get started. It is a series of education- and career-planning guides designed to help you make informed, smart career decisions. You can use this information to eliminate options that aren’t attractive, so you can begin focusing on a career direction that is more appealing.

If you change your mind along the way, *Pathways to Success* can help you redirect your career plans, courses, and extracurricular activities.

In South Carolina, there are 16 career clusters that you can explore. This issue of *Pathways to Success* introduces you to one of these clusters. The clusters correspond to different fields within the job market (business, healthcare, the arts, agriculture, manufacturing, etc.).

Each issue of *Pathways to Success* explains what it is like to work in one of the career clusters, what kinds of jobs are available, and what parts of the career cluster are growing fastest. It also spells out the specific ways to prepare yourself for an occupation: majors to choose in high school, what classes to take, opportunities to learn outside of class, and the kind of education and training you can pursue after high school.

Believe it or not, being in school gives you a great chance to explore all of your options. So go for it. Figure out just how you feel about certain subjects. Seek out those things that you feel good about. Then start preparing yourself so you will be able to do the things you like to do “when you grow up.”

## Career Opportunities in Agriculture, Food, and Natural Resources are Growing

**Agriculture isn’t just farming anymore. Opportunities abound in this wide open field**, from working with small animals to designing new tools and machines for farming and processing foods; from sports turf management and outdoor recreation to bioengineering new plant life. Those with technical skills and an interest in math, science, and the environment can find their places in the sun in the Agriculture, Food, and Natural Resources cluster.



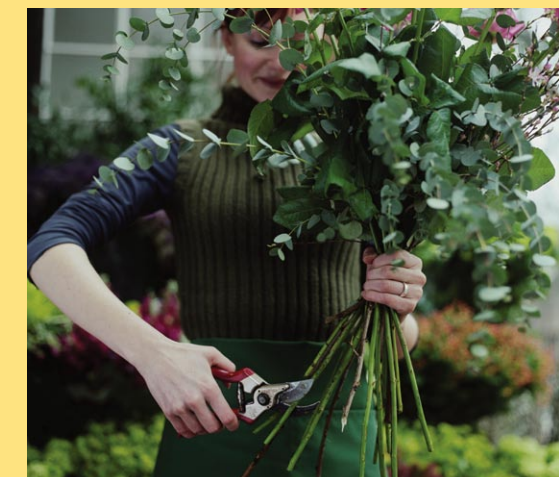
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### ATTENTION:

### Parents, Teachers, and Counselors: This Guide Is for You, Too.

This career cluster guide speaks to students about their education and career paths, but you play a critical role by providing guidance as they plan their futures. Read this guide and learn more about the Agriculture, Food, and Natural Resources cluster. Then sit down and talk with your child or the student you are advising. Help craft an Individual Graduation Plan or IGP that puts that teen on a personal pathway to success (see “What is an IGP?” on page 6).



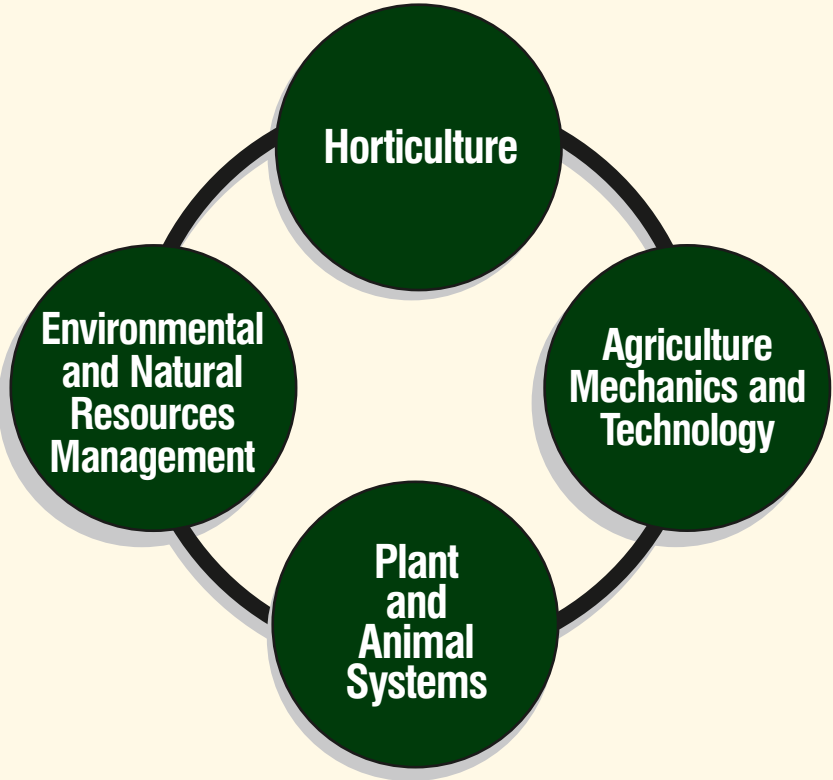


# What Are Career Clusters and Majors?

Career clusters help you acquire the knowledge and skills you need to reach your personal career goals. They organize what you learn in school around specific professional fields such as Education and Training or Information Technology. Information Technology, for example, focuses on professions that require highly technical training, while Human Services emphasizes occupations that involve people skills. South Carolina recognizes these 16 career clusters offered at various schools across the state.

- Agriculture, Food, and Natural Resources
- Architecture and Construction
- Arts, A/V Technology, and Communications
- Business, Management, and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Science
- Hospitality and Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections, and Security
- Manufacturing
- Marketing, Sales, and Service
- Science, Technology, Engineering, and Mathematics
- Transportation, Distribution, and Logistics

## Majors Clustered Under Agriculture, Food, and Natural Resources



Each cluster consists of career majors, which are based on groups of professions that require similar talents, knowledge, and skills. For example, four majors fall within the Agriculture, Food, and Natural Resources cluster (see illustration above). Each major provides required courses, instructions, and experiences necessary to move toward employment in a specific field such as environmental and natural resources systems management, either right after high school or after additional education in college, the military, or elsewhere.

# A Model Career Cluster System

Career Awareness (Grades K-5)	<b>Grades K–2</b> <ul style="list-style-type: none"><li>• Students learn about different kinds of work.</li><li>• Students are instructed in diversity and gender equity in the workplace.</li><li>• Students learn about goal setting and decision making.</li><li>• Students learn what it means to be a good worker.</li></ul>
	<b>Grades 3–5</b> <ul style="list-style-type: none"><li>• Students use career assessment instruments to identify occupations.</li><li>• Students learn about occupations in the various career clusters.</li><li>• Students get involved in career guidance classroom activities.</li></ul>
Career Exploration (Grades 6-8)	<b>6th Grade</b> <ul style="list-style-type: none"><li>• Students begin career exploration activities, including identification of learning opportunities in the community.</li><li>• Students take career assessment instruments.</li><li>• Students identify jobs within the clusters requiring different levels of education.</li></ul>
	<b>7th Grade</b> <ul style="list-style-type: none"><li>• Students identify the steps of the career decision-making process.</li><li>• Students identify and explore sources of career information.</li><li>• Students take career assessment instruments.</li><li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li></ul>
	<b>8th Grade</b> <ul style="list-style-type: none"><li>• Students pick a cluster of study that they are interested in exploring.</li><li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li><li>• Students meet with parents, counselors, teachers, guardians, and legal designees to develop both an academic and career portfolio consistent with their academic and career focus.</li><li>• Students take career assessment instruments.</li></ul>
	<b>9th Grade</b> <ul style="list-style-type: none"><li>• Students may declare majors and focus their elective choices in particular areas.*</li><li>• Students review and update their IGP.</li><li>• Students take career assessment instruments.</li><li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li></ul>
Career Preparation (Grades 9-Postsecondary)	<b>10th Grade</b> <ul style="list-style-type: none"><li>• Students should declare a career major.*</li><li>• Students review and update their IGP.</li><li>• Students take career assessment instruments.</li><li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li></ul>
	<b>11th Grade</b> <ul style="list-style-type: none"><li>• Students review and update their graduation plans, with particular attention to postsecondary goals.</li><li>• Students take career assessment instruments.</li><li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li><li>• Students may change or modify their career majors.</li></ul>
	<b>12th Grade</b> <ul style="list-style-type: none"><li>• Students complete requirements for their majors.</li><li>• Students receive recognition for completion of career cluster majors at graduation.</li><li>• Students take career assessment instruments.</li><li>• Students explore work-based learning activities including service learning, job shadowing, and mentoring.</li><li>• Students may change or modify their career majors.</li></ul>
	<b>Postsecondary</b> <ul style="list-style-type: none"><li>• Students follow aligned career cluster pathways to a two- or four-year college, the military, other postsecondary education or training, or employment.</li><li>• Students obtain rewarding entry-level employment within their chosen clusters.</li><li>• Students continue to refine career choices throughout their lifetimes of learning.</li></ul>

\* Students are encouraged to review their IGP and modify or change this focus throughout their secondary school careers with the guidance of educators and parents.



# Seven Steps to Success



**Making your way through high school on to college or other education, and into an Agriculture, Food, and Natural Resources career all starts with smart planning.**

**Your future career can be fun, or it can make you totally miserable, depending on whether or not you choose one that fits your unique personality, interests, goals, and abilities.**

Planning to be a nurse, for example, makes no sense if you can't stand the sight of blood. Forget being an engineer if you aren't going to take on advanced math. And if you live to be outdoors, opt out of a profession that keeps you cooped up in an office all day. The truth is, earning a living for about 40 years is a lot more rewarding—financially and otherwise—if you find the profession that fits you perfectly.

The search for your perfect profession starts with creating an Individual Graduation Plan, often called an IGP, to guide you through high school (see “What is an IGP?” on page 6). Every South Carolina student is required to create an IGP, but don't think of it as a hassle. Instead, look at it as a chance to explore your interests and options and to start working toward your personal dream—whether it's to be a movie star or a minister, a CEO or a chef, an entrepreneur, or an engineer.

**Here's a step-by-step guide to creating your own Individual Graduation Plan.**

## ■ Step 1: Complete Assessments

Start putting together your IGP by determining your strengths and weaknesses, what you love (or hate) to do with your time, and your hopes and dreams in life. To find the answers to these and other questions, take advantage of career assessment tools such as Holland's Self-Directed Search, ASVAB (Armed Services Vocational Aptitude Battery), and the Kuder Interest Inventory available through your school and online (see “What is an IGP?” on page 6).



## ■ Step 2: Research Your Career Opportunities

After learning more about yourself, put together a list of careers you might want to research. Get the facts about what each possible profession pays,



how many jobs in those professions are available in South Carolina (both now and in the future), and what kind of education you'll need to break into each of them. (For profiles of 25 career options in Agriculture, Food, and Natural Resources, see page 8). Use the career information resources available through your school's library and the Internet,

including SCOIS, O\*NET, and COIN (see “Resource Roundup” on page 21). Go beyond the statistics, though, to get the inside story on what those who work in occupations on your list really do every day. Start by contacting professional associations and visiting Web sites, then arrange personal interviews and job shadowing.

## ■ Step 3: Explore Your Education Options



Use your list of possible professions to investigate your education options in high school and beyond (see “Postsecondary Training Leads to Professional Growth” on page 18). Identify both two-year and four-year colleges with programs that best fit your career goals. In the same way, find out about obtaining associate's degrees at two-year technical colleges with programs in Agriculture, Food, and Natural Resources. Also, research opportunities for Agriculture, Food, and Natural Resources training in the military. Then look at the clusters, majors, and courses offered in high school as well as special programs such as co-op education and dual-credit courses. Learn about academic requirements and tests you may have to take to graduate and get into college, including PACT, PSAT, PLAN, SAT, ACT, and WorkKeys. Also, explore extracurricular activities (see “Learn by Doing” on page 16) related to your list of possible professions, including sports, community service groups, band, clubs, and student organizations such as FFA.

## ■ Step 4: Talk About Your Options With Parents and Counselors

Assessments and research are essential, but input from your parents (or guardians), counselors, and teachers can also help as you narrow your career and education choices. Talk with them about what you are learning as you are assessed—they can help you further identify your strengths, opportunities, and interests. Tell them about your hopes and dreams. Discuss with them career options five, 10, or 20 years from now. Ask them to help with your research by providing resources or using their contacts to set up career exploration experiences such as job shadowing and internships. Time with your guidance staff person may be limited, so make the most of it. Come in with clear and well-researched ideas about your future, and ask what he or she can do to help you get where you want to go in life.

## ■ Step 5: Make Your Choices and Document Your Decisions



Now that you are armed with valuable research and good advice from people you trust, it's time to make some decisions. Ask your counselor what format your IGP should follow—it likely will include most of the information shown in “What is an IGP?” on page 6. Select your career objective, cluster, and major, and write them down on your IGP. Fill in a tentative schedule for your high school years. Add to your plan lists of the out-of-class and work experiences you want to pursue and your goal after high school—college, the military, employment, or another option. It's also smart to create a career portfolio, which is a file of material related to the education and career choices in your IGP. This portfolio might include items such as a resume, samples of your schoolwork, and research and assessment information. Once you have documented your decisions, save your IGP and career portfolio as your school directs.

## ■ Step 6: Review and Revise Your IGP Each Year

A good IGP is frequently updated. It expands and changes as you go through high school. At least once at the end of each year, go back to your IGP and revise it as needed. Ask yourself if your decisions are still sound or if you've changed your mind about your career objective or plans after high school. Be realistic, but don't feel locked in to the choices you made earlier. Switching your cluster or major as you learn more about your interests and options in life is okay. Some direction—even if it changes—is better than no direction at all. Use this annual review of your plan to make choices that are intentional, not accidental, as you grow and change.

## ■ Step 7: Graduate and Move On to Additional Education or Employment

The goal of an IGP is to give you a clear path to high school graduation, but that's not the end of your road to success. The plan you created will carry you on to college, the military, an apprenticeship, other education or training, or directly into the job market. You likely will continue to evaluate, research, discuss, and refine your career choices after high school and throughout your life.



# What is an IGP?

An **Individual Graduation Plan (IGP)** is like a road map to your future. If you stay on course, you'll reach your destination—graduation—with all the courses, skills, and experience you need to take your education or career to the next level. Here's what a basic IGP includes:

Information such as your name and school.

Your chosen career cluster is a field of study such as Education and Training or Business, Management, and Administration on which you plan to focus in high school and beyond. South Carolina recognizes 16 career clusters (see page 2), although local schools and districts may offer different clusters. This guide is an introduction to the Agriculture, Food, and Natural Resources.

Your plan for what to do after high school—get an associate's or bachelor's degree, enter the armed forces, seek industry certification, find employment, or pursue other options. Be specific—it's just a goal you can change later if needed.

A grade-nine-through-twelve outline of classes you should take, including core academic classes required for graduation and electives. Fill in the specific classes your school offers.

Your school may make this type of basic IGP part of your career portfolio—a file or folder that also may contain such information as results of your career-interest assessments, examples of your schoolwork, your scores from standardized tests, and records of your work experiences.

Out-of-class learning opportunities you want to pursue, such as student organizations or work experiences.

**Individual Graduation Plan**

Name: Harriet Coker  
 School: East High School  
 Cluster: Agriculture, Food, and Natural Resources Systems Management  
 Major: Environmental and Natural Resources  
 Postsecondary Goal: Bachelor's degree in Wildlife Biology from a four-year college

9th Grade	10th Grade	11th Grade	12th Grade
English 1	English 2	English 3	English 4
Algebra 1	Geometry	Everyday Statistics	Advanced Math Topics
Physical Science	Biology 1	Marine Science	Physics
Social Studies	Computer Science	US History	Government/Economics
Physical Education	Foreign Language	Arts	Elective
Agricultural and Environmental Science	Environmental and Resource Management	Wildlife Management	Forestry

Cocurricular Activities: Future Farmers of America (FFA)  
 Work-Based Learning Opportunities: Internship, co-op education, job shadowing

## Growing Careers



Growing demand worldwide is creating careers with excellent growth potential.

## Quick Quiz

Answer “yes” or “no” to these questions to see if Agriculture, Food, and Natural Resources is the right career cluster for you.

- I am able to explain why different types of weather affect how crops and plants grow.
- I can plant, maintain, and harvest a vegetable garden.
- I am skilled at working with my hands.
- I am good at caring for large animals, such as cows or horses, that would live on a farm or a ranch.
- Changing raw materials into useful products, such as making paper from wood, sounds exciting to me.
- I'd like to work with animals and plants.
- I'd like to study the effects of chemicals on plants and soil.
- I'd like to work with hand tools.
- I'd like to work outdoors.
- I can make preparations to protect myself and others from natural disasters, such as hurricanes and tornadoes.

Totals: “Yes” \_\_\_\_\_ “No” \_\_\_\_\_

If you answered “yes” to five or more of the questions, then you may have what it takes to make it in Agriculture, Food, and Natural Resources.

Source: SCOIS (Coin Career) Assessment Tests

### Population growth at home and worldwide is rearranging the way the world economy works.

Countries such as India and China have populations that are by far larger than the U.S. population. As these nations become more prosperous, they consume more and more food and other resources, such as oil. One solution is to increase production of biofuels and other renewable, clean power resources, for instance, wind turbines and solar panels. In South Carolina, we not only have an agrarian tradition, we also have the available acreage in parts of the state that are in need of economic development, and we have the college and technical training and the vision to take advantage of growing demand for Agriculture, Food, and Natural Resources.

You do not have to grow up on a farm to work in “agribusiness.” People with interest in the outdoors, environment, animals, food and food processing, science, engineering, and business can all be a part of this exciting field. Do you like animals? Check out Pre-veterinary Science. How's your golf game? A career in Sports Turf Management or Golf Course Management might just be fairways to satisfying careers. Horticulture, or gardening, is a growing trend, as is Landscape Architecture and Outdoor Recreation.

In the face of global warming, the demand for environmental engineers is expected to outpace the supply. How would you like to be the person whose research discovers a new recycling process that provides an endless supply of reuse for efficient biofuel conversion? Or the engineer who designs a revolutionary crop-planting system? Agribusiness is not just farming anymore. The possibilities are endless in Agriculture, Food, and Natural Resources, so pick your major and map out your pathway to an exciting career in this fast-changing and diverse field.



## About This Chart

This chart is a sampling of 25 of the more than 100 occupations that fall within the Agriculture, Food, and Natural Resources sector of the South Carolina job market. For more information about any Agriculture, Food, and Natural Resources occupation, check out the South Carolina Occupational Information System (SCOIS). This electronic database is packed with valuable information on careers, colleges, scholarships, and more. SCOIS is available in local schools and at more than 600 other locations throughout South Carolina. Here are explanations for the abbreviations and symbols used in this chart.

### Education Requirement Abbreviations

- C** — 12- or 18-month certificate
- AD** — Two-year associate’s degree
- AP** — Advanced Placement
- BD** — Four-year bachelor’s degree
- HS** — High school diploma or GED
- MA** — Master’s degree
- NA** — Information not available or item does not apply
- OJT** — On-the-job training
- DD** — Doctorate degree

Source: [www.salary.com](http://www.salary.com)

# 25 Career Choices in Agriculture, Food, and Natural Resources

Occupation	SC Salary	Job Growth <sup>1</sup>	Education Required <sup>2</sup>	Career Readiness Certificate Level <sup>3</sup>	Description
Agricultural Engineer	\$60,800	NA	BD, MA, DD	gold	Applies knowledge of engineering and biological science to agricultural production, processing, and distribution.
Agricultural Scientist	\$44,860	4.81%	BD, MA, DD	gold	Studies and performs research on soil, plants, animals, and animal products.
Animal Caretaker	\$20,360	9.97%	OJT, HS	bronze	Feeds, waters, grooms, bathes, and exercises animals.
Biological Scientist	\$56,310	NA	BD, MA, DD	gold	Studies life forms to explore their economic value in Agriculture.
Botanist	\$63,720	NA	BD, MA	gold	Studies plant structure, physiology, heredity, distribution, and economic value.
Agriculture Teacher	\$43,462	17.20%	BD, MA	silver	Instructs students in one or more agricultural subjects.
Environmental Science Technician	\$37,810	12.08%	BD	gold	Solves environmental problems related to land, air and water pollution, radiation, and toxic materials.
Farm and Home Management Advisor	\$33,810	NA	BD, MA	gold	Develops agriculture and home economics services for people.
Farmer/Farm Manager	\$47,480	NA	OJT, HS, AP, BD	gold	Raises, tends, markets, and manages crops and farm animals.
Fish and Game Warden	\$42,170	NA	BD, MA	gold	Works to protect, conserve, and manage wildlife and its habitats while enforcing game laws.
Forester and Conservation Scientist	\$56,360	7.05%	BD, MA	gold	Manages forests, rangelands, wildlife, minerals, water, and other natural resources for consumption, conservation, and recreation.
Gardener and Groundskeeper	\$22,380	17.51%	OJT	silver	Maintains the grounds of properties to keep them in a neat and orderly condition.
Heavy Equipment Service Technician	\$36,150	10.24%	OJT, HS, AP	gold	Maintains heavy equipment machinery used in agriculture.
Landscape Architect	\$51,620	15.96%	BD, MA	gold	Designs, plans, and manages land, such as parks, developments, campuses, gardens, and resorts.
Meteorologist	\$67,650	NA	BD, MA	gold	Studies weather patterns crucial to plant and animal growth.
Microbiologist	\$48,890	NA	BD	gold	Investigates the growth and characteristics of microscopic organisms such as bacteria.
Nursery Worker	\$17,800	NA	OJT, HS	bronze	Plants, cultivates, harvests, and cares for trees, shrubs, flowers, and turf grasses.
Oceanographer	\$51,250	11.82%	BD, MA	gold	Studies the movements and physical aspects of plants and animals and the geology of the oceans.
Sales Engineer	\$67,860	5.78%	BD	gold	Markets complex equipment or chemical products to agricultural practitioners.
Soil Scientist	\$45,680	NA	BD	gold	Studies the composition of soils as they relate to plant or crop growth.
Surveyor and Cartographer	\$40,180	12.27%	OJT, AP	gold	Determines the location of points, lines, and contours of the earth’s surface and prepares maps or reports.
Veterinarian	\$80,900	9.38%	DD	gold	Diagnoses, treats, and controls diseases and injuries of animals.
Veterinary Assistant/Technician	\$31,930	11.96%	OJT, HS, AP	gold	Assists veterinarians in activities such as surgical preparation and assistance, lab analysis, and routine animal care.
Wildlife Biologist	\$49,800	NA	BD	gold	Researches, conserves, and manages wildlife and its habitats.
Zoologist	\$49,800	NA	BD, MA	gold	Studies all aspects of the biology of specific groups of animals.

1 The expected percentage increase or decline in the number of positions in the profession in South Carolina through 2008.  
2 The minimum educational attainment required to enter the profession; occupations may have different entry-level jobs for those with different degrees.

3 The South Carolina Career Readiness Certificate demonstrates to employers that you have the skills necessary to be successful in your chosen occupation. For more information on the CRC in South Carolina go to [www.WorkReadySC.org](http://www.WorkReadySC.org).



Plant the Seeds for a Future in Agriculture, Food, and Natural Resources

Plan B 2.0 and The New Career Possibilities

10 Highest-Paying Agriculture, Food, and Natural Resources Professions

	Occupation	Salary
1.	Veterinarian	\$80,900
2.	Mining and Geological Engineer	\$70,500
3.	Sales Engineer	\$67,860
4.	Meteorologist	\$67,650
5.	Industrial Engineer	\$64,600
6.	Botanist	\$63,720
7.	Agricultural Engineer	\$60,800
8.	Transportation Manager	\$58,570
9.	Purchasing Agent	\$57,500
10.	Range Manager	\$57,320

Based on annual mean salary in South Carolina.  
Source: SCOIS

10 Fastest-Growing Agriculture, Food, and Natural Resources Professions

	Occupation	Job Growth
1.	Pest Controller	24.1%
2.	Dietitian and Nutritionist	20.0%
3.	Energy Conservation and Use Technician	17.7%
4.	Gardener and Groundskeeper	17.5%
5.	Equipment Operator	17.4%
6.	Landscape Architect	16.0%
7.	Surveyor and Cartographer	12.3%
8.	Environmental Science Technician	12.1%
9.	Veterinary Assistant/Technician	12.0%
10.	Geologist and Geophysicist	11.8%

Based on expected growth in percentage of jobs available between 2001 and 2008 in South Carolina. Source: SCOIS

If you were to think of building a career as if it were a tree, you would start with a foundation rooted in knowledge that provides increasing opportunities to branch out into a multitude of career pathways. As you grow, you expand your capabilities with more relevant education and work-based learning that allows your career to blossom into a fulfilling career.

The Career Major Maps beginning on page 12 will help you find your way through the Agriculture, Food, and Natural Resources cluster and give you a good idea of the choices you have once you decide that this is indeed the one tree in the career forest that you want to climb.

To make your way to different jobs, you have to prepare in different ways, and the career majors represent those different pathways to different jobs. (See “What Are Career Clusters and Majors?” on page 2). The Career Major Maps include sample high school schedules, but keep in mind that your school may offer different programs and classes. The maps also include information about extracurricular activities, options after high school, and jobs for which each major might prepare you. Use these maps to create your IGP and to chart your course to the career of your choice. In Agriculture, Food, and Natural Resources, there are four different majors to choose from:

- Environmental and Natural Resources Management (page 12)
- Agriculture Mechanics and Technology (page 13)
- Horticulture (page 14)
- Plant and Animal Systems (page 15)

Each of these majors corresponds to the Agriculture, Food, and Natural Resources job market in South Carolina. If you choose an Agriculture Mechanics and Technology major, for example, you can follow that pathway on to particular programs in Equipment Maintenance or Mechanical Engineering offered at two- or four-year colleges and then into occupations such as maintenance supervisors or design engineers after completing your training. Generally, you need to take four electives in your major area to graduate with a high school major.

For an idea of where your major choice can take you in Agriculture, Food, and Natural Resources, take a look at the introduction to “Plan B 2.0, Rescuing a Planet Under Stress and a Civilization in Trouble” by Lester R. Brown, president of Earth Policy Institute, a research organization based in Washington, DC. With the competition for natural resources escalating along with global population growth, the demand for people with training in this cluster will grow, as well.

Revisit Your Choices

If you find yourself unhappy with where a career pathway is taking you, it’s no big problem. Because you have a reliable set of career road maps, you can always pull over and take a break to reconsider your earlier decisions. As you move through your high school career, you will have plenty of opportunities to review and change your choices. You are free to sample different majors and opt for the one that best suits your tastes.

*\*The U.S. Department of Education lists these four basic majors under Agriculture, Food, and Natural Resources but uses different names. The Agriculture, Food, and Natural Resources major may be pursued in South Carolina at the postsecondary level. Local schools and districts may offer fewer career clusters and majors, have clusters and majors that are organized differently, or clusters and majors with alternative names.*



The following edited excerpt from the introduction to Plan B 2.0, Rescuing a Planet Under Stress and a Civilization in Trouble

by Lester R. Brown is an eye-opening commentary on the state of our global economy and the changes that must be made in the Agriculture, Food, and Natural Resources cluster in the future to ensure sustainable economic success. Read this and think about it in terms of the future. You’ll see that there will be careers and opportunities in this field that haven’t even been thought of yet!

“Our global economy is outgrowing the capacity of earth to support it, moving us ever closer to decline and possible collapse. We have lost sight of how vast the human enterprise has become. A century ago, annual growth in the world economy was measured in billions of dollars. Today, it is measured in trillions.

As a result, we are consuming renewable resources faster than they can regenerate. Forests are shrinking, water tables are falling, and fisheries are declining. We are using up oil at a pace that leaves little time to plan, and we are discharging greenhouse gases into the atmosphere faster than nature can absorb them.

Sustaining progress now depends on replacing the fossil fuel-based, throwaway economy with a new economy, one powered by abundant sources of wind, solar energy, hydropower, and biofuels. It will be a comprehensive reuse-recycle economy.

We have the technology needed to build the new economy, including gas-electric hybrid cars, advanced design wind turbines, highly efficient refrigerators, and water-efficient irrigation systems. We can see how to build the new economy brick by brick. With each wind farm, solar panel, and reforestation program, we move closer to an economy that can sustain economic progress.”

Academic Roots

Agriculture, Food, and Natural Resources careers are no different than any other: If you’re looking for success, you have to build on these academic basics.

- **Science:** This fast-growing, research-oriented cluster requires an analytical mind-set. From mixing fertilizer to biochemical engineering, mastering the scientific method gives you the mental edge you need.
- **Math:** From planning field seed application to balancing books being an ecologist, having a command of numbers is essential to a successful operation.
- **English:** Agriculture, Food, and Natural Resources can be anything from a business relationship-oriented enterprise to a people-oriented position in Agricultural Sales or Parks Management. Written and oral language skills are crucial to success.
- **Social Studies/History:** Advances in agricultural methods and technology have played an integral role in shaping the history and culture of America and South Carolina. Despite advances in technology, South Carolina remains a predominantly agrarian society.
- **Modern or Classical Language:** Agriculture, Food, and Natural Resources in South Carolina are becoming more dependent on immigrants from around the world. Language study helps you better manage workers and deal with a global economy.
- **Arts:** If you work outdoors or are concerned about the environment, you are able to appreciate the beauty of plants, animals, fields, lakes, and mountains. While art is not required to graduate from high school, it is a requirement for admission to any four-year college.

## Career Major Map: Environmental and Natural Resources Management

Environmental and natural resources systems managers develop an understanding and appreciation for nature and its habitats. They work to preserve native species while optimizing production of forest products and crops.

Required Core for Graduation	Sample Core Choices			
	For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
<b>English*</b> Four Units Required	English 1	English 2	English 3	English 4
<b>Math*</b> Four Units Required	Algebra 1 or Math for the Technologies 1	Geometry or Math for the Technologies 2	Algebra 2 or Math for the Technologies 3	Pre-Calculus or Math for the Technologies 4
<b>Science*</b> Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
<b>Social Studies</b> Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
<b>Additional State Requirements</b>	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units)  Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)			

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Agricultural and Environmental Science Environmental and Resources Management Wildlife Management Forestry  Courses offered locally that are specific to the Pathway	Equipment Operation and Maintenance Soil and Water Conservation Modern or Classical Language	Career Mentoring Shadowing Internship Cooperative Education

Professional Opportunities Upon Graduation		
High School Diploma Equipment Operator	Additional Training to 2-year Degree Forest Technician	4-year Degree & Higher Wildlife Biologist

\*Course selection will depend on satisfying prerequisites.

## Career Major Map: Agriculture Mechanics and Technology

People who choose this pathway love to drive, fix, or invent equipment that is used in Agricultural Processes. While they share a common passion, they are only separated by their educational attainment and desire to drive a tractor in the sun versus designing engineering schematics for new forms of equipment.

Required Core for Graduation	Sample Core Choices			
	For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
<b>English*</b> Four Units Required	English 1	English 2	English 3	English 4
<b>Math*</b> Four Units Required	Algebra 1 or Math for the Technologies 1	Geometry or Math for the Technologies 2	Algebra 2 or Math for the Technologies 3	Pre-Calculus or Math for the Technologies 4
<b>Science*</b> Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
<b>Social Studies</b> Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
<b>Additional State Requirements</b>	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units)  Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)			

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Agricultural and Environmental Science Agriculture Mechanics and Technology Agricultural Power Mechanics Agricultural Structural Mechanics  Courses offered locally that are specific to the Pathway	Equipment Operation and Maintenance Turf and Lawn Management Sports Turf Management Modern or Classical Language	Career Mentoring Shadowing Internship Cooperative Education

Professional Opportunities Upon Graduation		
High School Diploma Equipment Operator	Additional Training to 2-year Degree Equipment Technician	4-year Degree & Higher Agricultural Engineer

\*Course selection will depend on satisfying prerequisites.



## Career Major Map: Horticulture

The business of growing plants for production and use in landscapes is commonly called the “green” industry. People in this pathway work with turf grass, flowering plants, vegetables, shrubs, and all kinds of trees. Jobs can range from growing, to distribution, to care and maintenance.

Required Core for Graduation	Sample Core Choices			
	For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
<b>English*</b> Four Units Required	English 1	English 2	English 3	English 4
<b>Math*</b> Four Units Required	Algebra 1 or Math for the Technologies 1	Geometry or Math for the Technologies 2	Algebra 2 or Math for the Technologies 3	Pre-Calculus or Math for the Technologies 4
<b>Science*</b> Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
<b>Social Studies</b> Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
<b>Additional State Requirements</b>	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units)  Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)			

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Introduction to Horticulture Nursery, Greenhouse, and Garden Center Technology Turf and Lawn Management Landscape Technology  Courses offered locally that are specific to the Pathway	Equipment Operation and Maintenance Soil and Water Conservation Modern or Classical Language	Career Mentoring Shadowing Internship Cooperative Education

Professional Opportunities Upon Graduation		
<b>High School Diploma</b> Garden Center Employee	<b>Additional Training to 2-year Degree</b> Landscape Technician	<b>4-year Degree &amp; Higher</b> Landscape Architect

\*Course selection will depend on satisfying prerequisites.

## Career Major Map: Plant and Animal Systems

Plant and Animal Systems pathway professionals contribute to every phase of growing the plants and animals that we consume every day. They can be farmers, scientists who develop more efficient ways of producing and processing food, food brokers, veterinarians, or waste managers.

Required Core for Graduation	Sample Core Choices			
	For additional college entrance requirements, refer to the college of your choice.			
	9	10	11	12
<b>English*</b> Four Units Required	English 1	English 2	English 3	English 4
<b>Math*</b> Four Units Required	Algebra 1 or Math for the Technologies 1	Geometry or Math for the Technologies 2	Algebra 2 or Math for the Technologies 3	Pre-Calculus or Math for the Technologies 4
<b>Science*</b> Four Units Required	Physical Science	Biology or Applied Biology	Chemistry or Chemistry for the Technologies	Physics or Physics for the Technologies
<b>Social Studies</b> Three Units Required	Global Studies 1 or World Geography	Global Studies 2 or Social Studies Elective or World History	U.S. History	Economics/Government
<b>Additional State Requirements</b>	Physical Education or JROTC (one unit) Computer Science (one unit) Electives (seven units)  Pass High School Assessment CTE or Modern or Classical Language (one unit) Art (one unit)			

Courses for Major (Minimum of four credits required)	Complementary Course Work	Extended Learning Opportunity Options Related to Major
Agricultural Science and Technology Animal Science Small Animal Care Introduction to Veterinary Science  Courses offered locally that are specific to the Pathway	Equine Science Agribusiness and Marketing Modern or Classical Language	Career Mentoring Shadowing Internship Cooperative Education

Professional Opportunities Upon Graduation		
<b>High School Diploma</b> Pet Groomer	<b>Additional Training to 2-year Degree</b> Veterinary Technician	<b>4-year Degree &amp; Higher</b> Veterinarian

\*Course selection will depend on satisfying prerequisites.



**Get out in the field to gain real-world experience.**

## Beyond-the-Books Benefits

Blending course work with outside career-related opportunities enables you to:

- get a hands-on look at possible career choices;
- fine-tune your focus on the future;
- make more informed choices;
- create an IGP that is effective and efficient;
- graduate with the skills and experience colleges and employers want;
- earn college credits and even a paycheck before you graduate;
- build your career portfolio and resume;
- Jumpstart your career and/or college education.



## Learn by Doing

**In life, we learn in several different ways:** by studying, by following and gaining experience from someone with knowledge, and through experimenting and learning by trial and error what works and what doesn't work.

Gaining experience in some fields of Agriculture, Food, and Natural Resources is more like reawakening your inner instincts, since mankind has been immersed in the environment and the business of procuring food ever since we came to be as a species.

Other fields, such as horticulture and golf course management, are newer and involve innovative techniques and technologies. Training in these specialties can be acquired in traditional ways, through classroom study and out-of-class hands-on experience.

Finally, some fields such as biofuels and environmental engineering are still emerging and, while they offer great potential for growth, we have limited practical experience from which we can gain insight and knowledge. However, we can apply established scientific principles and experiences to develop ideas for the future.

### ■ Follow that Shadow

To learn by following, find someone who knows what he or she is doing, tag along, and observe. In career preparation, it's called "job shadowing," and it involves spending time with an experienced adult who works in your intended career field. You should get a pretty accurate picture of what a day on the job is like as you observe your mentor at work. Ask your parents, teachers, and guidance counselor to help you find a shadowing opportunity.

### ■ Get a Job

Many successful careers have begun as after-school jobs. They are a great way to gain experience and, in some cases, your part-time job can also earn you credit toward high school graduation. Start-up jobs in Agriculture, Food, and Natural Resources are plentiful. For instance, you could work on a golf course during the summer months and get experience in such areas as turf management, irrigation, or chemical and environmental impacts. If you happen to live in a rural area, ask the most progressive farmers about part-time work and learn how they apply new technologies to make their operations more efficient. Other suggestions for on-the-job learning opportunities include jobs at a local park or recreational area, a fish hatchery or commercial fishing operation, a veterinary clinic, a feed and farm supply store, a greenhouse, or in the produce or meat department of a local grocery store.

Talk with your guidance counselor and employer about crafting an individualized internship agreement. You may end your summer job with money in your pocket, valuable new skills and contacts, and credit toward graduation.



## Student Organizations

A number of co-curricular organizations offer opportunities for students to make friends across the state and nation, develop relationships with mentors, and learn new skills they can use in the Agriculture, Food, and Natural Resources career cluster.

- **The National FFA** – The National FFA Organization is dedicated to making a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education. The National FFA, formerly referred to as the Future Farmers of America, is an integral intra-curricular part of agricultural education under the National Vocation Education Acts. FFA operates on the local, state, and national levels and is organized into chapters in schools, where teachers serve as chapter advisors.

A key component of FFA is the career development designed to allow students to use knowledge gained in the classroom in competitive events on the local, state, and national level.

The FFA is currently the largest educationally associated youth group in the U.S. It is also one of the oldest educational youth organizations (founded in 1928). Current membership is about 500,000 individuals participating in over 7,200 chapters located in all 50 states, Puerto Rico, and the Virgin Isles. Annually, more than 50,000 FFA members come to the National FFA Convention. Below are just a few of the programs that are offered through the FFA. Visit [www.FFA.org](http://www.FFA.org) for more information.

- Contests – referred to as Career Development Events (CDE); there are currently 23 CDEs offered in SC
- Proficiency Awards – used to recognize students for their Supervised Agricultural Experience Projects (on-the-job learning)
- State Convention
- Summer Camp (the SC Association owns a camp in North Myrtle Beach)
- Washington Leadership Conference (held in Washington, DC)
- State President's Conference (held in Washington, DC)
- National Leadership Conference for State Officers (NLCSO)
- PALS program (mentor program)
- Chapter Award program (designed to recognize local chapters for their accomplishments)
- State and National Officers

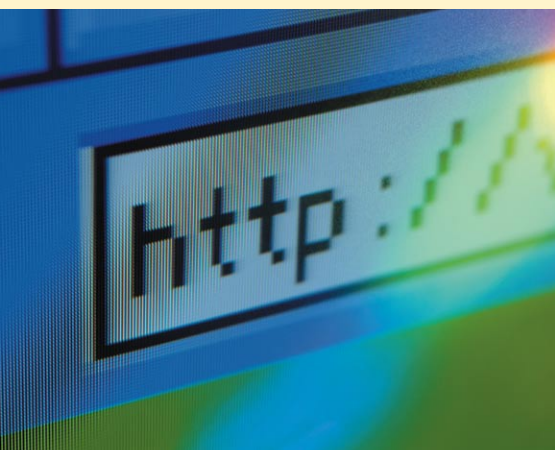
- **Young Farmer and Agribusiness Association** – In support of life-long learning, the Young Farmer and Agribusiness Association was formed some 60 years ago to provide a continuing education resource for agribusiness practitioners associated with FFA. The South Carolina association is an affiliate of the National Young Farmer Education Association (NYFEA) and, in fact, has the largest NYFEA membership in the nation. [www.scaged.org/SCYF/index.htm](http://www.scaged.org/SCYF/index.htm)



# Postsecondary Training Leads to Professional Growth

South Carolina has the training you need for success in the many fields of Agriculture, Food, and Natural Resources.

## College Connections



Every South Carolina two- and four-year college has a Web site that includes information about admission requirements, majors, fees, financial aid, internships, and scholarship opportunities.

You can find the Web site for any South Carolina public, private, or technical college through one of these sites:

- South Carolina Public Colleges/Universities  
[www.state.sc.us/edu/univcoll.html](http://www.state.sc.us/edu/univcoll.html)
- South Carolina Technical Colleges  
[www.scteched.tec.sc.us](http://www.scteched.tec.sc.us)
- South Carolina Independent Colleges/Universities  
[www.scicu.org](http://www.scicu.org)



**Agribusiness is the second biggest industry in South Carolina,** and its share of the economy has the potential to be super-sized!

In response to concerns of global warming and increasing competition for natural resources and crops that supply us with both food, animal feed, and biofuels, a greater emphasis is being placed on new ways of going about the age-old business of agriculture.

In South Carolina, the Agriculture, Food, and Natural Resources cluster covers hundreds of diverse career paths, from botanists to biochemists, from horticulturists to farmers, and from wildlife biologists to agricultural applications software developers. The list goes on, and so do the opportunities for the training you'll need to succeed in the field of your choice.

But, remember, before you can grow, you have to prepare the way. Here are some sources of education after high school that can help you build a career in Agriculture, Food, and Natural Resources:

## ■ Four-Year Colleges and Universities

Students interested in Agriculture, Food, and Natural Resources should definitely look into the College of Agriculture, Forestry, and Life Sciences (CAFLS) at Clemson University. As an original land-grant college, Clemson's roots are in agriculture education and the school is regarded as the "go-to" resource for advanced studies, techniques, and research in all areas of Agribusiness. The Clemson CAFLS offers undergraduate degrees, master's degrees, and Ph.D. programs through its ten departments: Applied Economics and Statistics, Agricultural and Biological Engineering, Animal and Veterinary Sciences, Genetics and Biochemistry, Entomology, Soils and Plant Sciences, Food Science and Human Nutrition, Forestry and Natural Resources, Horticulture, and Packaging Science.

Opportunities for postsecondary education are not restricted to Clemson, however. The University of South Carolina (USC) College of Geological Studies also offers training in Agriculture, Food, and Natural Resources. USC's programs include Environmental Geosciences, Geochemistry, Geophysics, Global Climate Change, Hydrocarbon Exploration, Marine Sciences, Oceanography, Petrology, Satellite Geodesy, Sedimentology, Seismology, Structural Geology, and Tectonics.

## ■ Two-Year Colleges

If you have a "feel" for the land or would like a career that doesn't tie you to a desk, you don't have to spend four years or more earning a degree or diploma to open the door to lucrative, in-demand jobs in an Agriculture, Food, and Natural Resources career. South Carolina's technical colleges offer a variety of programs in their Agriculture mix. For instance, Horry-Georgetown Technical College offers associate degrees in Forest Management Technology, Golf Course Management, and Horticulture Technology. These courses of study are designed to offer students more direct connections to careers with any one of several international paper manufacturers with plants in the region, any one of over 125 golf courses or nursery operations in the two-county area, and beyond. Horticulture Technology is also offered at some other campuses across the state, including Trident, Spartanburg and Piedmont Technical Colleges. In addition, an associate's degree in Natural Resource Management is available through Central Carolina Technical College.



## ■ Military Options

While the armed services are a great way to gain experience in many fields and earn money for college, military training applies indirectly to only a few areas of the Agriculture, Food, and Natural Resources cluster. Construction engineering is one of those areas. However, you might want to explore career opportunities with the U.S. Army Corps of Engineers. While only 2% of the Corps is active military, this mostly civilian public engineering organization is committed to preserving and enhancing our natural environment. This mission requires a multidisciplinary team since it deals with such diverse concerns as water resource management, coastal engineering, electric power development, and production. The list of opportunities and required skills goes on and on. Learn more about what the military has to offer by going to [www.usace.army.mil](http://www.usace.army.mil) (U.S. Army Corps of Engineers), [www.goarmy.com](http://www.goarmy.com) (Army), [www.navy.com](http://www.navy.com) (Navy), [www.uscg.mil](http://www.uscg.mil) (Coast Guard), [www.airforce.com](http://www.airforce.com) (Air Force), and [www.marines.com](http://www.marines.com) (Marines).

## Money For School

If you're worried about finding money for training and education, quit worrying and get to work. Assistance in the form of grants, loans, and scholarships is available at every step of your career and is not just for the college-bound. With worker shortages looming, many companies not only provide on-the-job training but also pay for you to master new skills at local colleges, technical schools, or other training programs. Trade associations and unions also provide financial incentives for you to learn new skills.

You won't know if you qualify for aid unless you apply, so don't be shy about asking for help from your high school counselor or financial aid officers at the schools you would like to attend. Start your online search at [www.finaid.org](http://www.finaid.org). The site lets you explore the basics of scholarships, grants, loans, savings plans, and tax incentives. This site also lists trade- and industry-specific scholarships.

In South Carolina, the Commission on Higher Education offers assistance through a variety of avenues, including LIFE Scholarships, the South Carolina HOPE Scholarship, and the Palmetto Fellows Scholarship. The Lottery Tuition Assistance Program for students in technical schools is administered through the state's technical college system, and the Tuition Grants Program provides need-based aid.

More than \$80 billion dollars a year in federal aid is available nationwide for students enrolled in certification programs, degree and non-degree programs, trade schools, career and technical schools, colleges, and universities. Apply online by completing the "Free Application for Federal Student Aid" (FAFSA) at [www.fafsa.ed.gov](http://www.fafsa.ed.gov), or ask your guidance counselor or college or technical school admissions officer for a hard copy of the form.

Federal Work-Study funds are available through technical schools and colleges in South Carolina. If you're planning a military career, the Reserve Officer Training Corps (ROTC) will pay you to attend school. Military veterans also qualify for college aid through the GI Bill, and vets can receive aid through On-the-Job Training (OJT) and Apprenticeship Programs (APR), as well.

The National FFA provides several millions of dollars worth of scholarships each year. In addition, scholarships are made available through the following: The State Fair, Farm Bureau, South Carolina Association of Conservation Districts, South Carolina Fertilizers Association, South Carolina Young Farmer and Agribusiness Association, and many more.



Core Requirements for Graduation

High School Graduation

Subjects	Units Required
English/Language Arts	4
Mathematics	4
Science	3
U.S. History and Constitution	1
Economics	0.5
U.S. Government	0.5
Other Social Studies	1
Physical Education or Junior ROTC	1
Computer Science	1
Modern or Classical Language or Career and Technology Education	1
Electives	7
Total *	24
* Must pass the exit examination.	

State Certificate

Subjects	Units Required
English/Language Arts	4
Mathematics	4
Science	3
U.S. History and Constitution	1
Economics	0.5
U.S. Government	0.5
Other Social Studies	1
Physical Education or Junior ROTC	1
Computer Science	1
Modern or Classical Language or Career and Technology Education	1
Electives	7
Total *	24
* Must have failed to meet the standard on all subtests of the exit examination.	

College Entrance

Subjects	Units Required
English/Language Arts	4
Grammar and Composition	2
English Literature	1
American Literature	1
Mathematics	4
Algebra 1 and 2	2
Geometry	1
Pre-Calculus	1
Modern or Classical Language	2
Laboratory Science Biology, Chemistry, or Physics	3
Social Sciences U.S. History, Economics, and Government	3
Electives	1
Physical Education/ROTC	1
Arts	1
Total	19



The South Carolina Department of Education does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs or activities. Inquiries regarding the nondiscrimination policies should be made to:

Director, Office of Human Resources  
206 Rutledge Building  
1429 Senate Street  
Columbia, South Carolina 29201  
Telephone 803-734-8505

Resource Roundup

Click your way to more career, educational, and scholarship resources by using the Internet. Here are some useful Web sites to get you started:

Agriculture, Food, and Natural Resources Web Sites

- American Society for Horticultural Science, [www.ashs.org/careers](http://www.ashs.org/careers)
- Clemson University College of Agriculture, Forestry and Life Sciences, [www.clemson.edu/CAFLS](http://www.clemson.edu/CAFLS)
- Environmental School Directory, [www.enviroeducation.com](http://www.enviroeducation.com)
- National FFA Organization, [www.ffa.org](http://www.ffa.org)
- South Carolina Agricultural Education, [www.SCAgEd.org](http://www.SCAgEd.org)
- South Carolina Department of Agriculture, [www.scd.a.state.sc.us](http://www.scd.a.state.sc.us)
- South Carolina Nursery and Landscape Association, [www.scnla.com](http://www.scnla.com)
- South Carolina Technical College System Degree and Diploma Programs, [www.sctechsystem.com/PgmMatrix/default.aspx](http://www.sctechsystem.com/PgmMatrix/default.aspx)
- Sports Turf Managers Association, [www.stma.org](http://www.stma.org)
- Team Ag Ed, [www.teamaged.org](http://www.teamaged.org)
- United States Department of Agriculture, [www.USDA.gov](http://www.USDA.gov)
- U.S. Golf Association, [www.USGA.org/turf](http://www.USGA.org/turf)

Search the Internet for other professional organizations related to Agriculture, Food, and Natural Resources careers.

Education and Career Planning Web Sites

Inside South Carolina

- Career Guidance Model, [www.careerguidancemodel.org](http://www.careerguidancemodel.org)
- South Carolina Chamber of Commerce, [www.scchamber.net](http://www.scchamber.net)
- South Carolina Commission on Higher Education, [www.che400.state.sc.us](http://www.che400.state.sc.us)
- South Carolina Employment Security Commission, [www.sces.org](http://www.sces.org)
- South Carolina Higher Education Tuition Grants Commission, [www.sctuitiongrants.com](http://www.sctuitiongrants.com)
- South Carolina Independent Colleges and Universities, [www.scicu.org](http://www.scicu.org)
- South Carolina Occupational Information System, [www.scois.net](http://www.scois.net)
- South Carolina Public Colleges and Universities, [www.state.sc.us/edu/univcoll.html](http://www.state.sc.us/edu/univcoll.html)
- South Carolina Technical College System, [www.sctechsystem.com](http://www.sctechsystem.com)
- WorkKeys, [www.workreadysc.org](http://www.workreadysc.org)

Outside South Carolina

- America's Career Resource Network Association, [www.acrna.net](http://www.acrna.net)
- Career Communications, Inc., [www.carcom.com](http://www.carcom.com)
- Armed Services Vocational Aptitude Battery (ASVAB), [www.todaysmilitary.com/app/tm/nextsteps/asvab](http://www.todaysmilitary.com/app/tm/nextsteps/asvab)
- Career Interests Game, [career.missouri.edu/students/explore/thecareerinterestsgame.php](http://career.missouri.edu/students/explore/thecareerinterestsgame.php)
- Career Key, [www.careerkey.org](http://www.careerkey.org)
- Coin Career College System, [community.coin3.com](http://community.coin3.com)
- College Board, [www.collegeboard.com](http://www.collegeboard.com)
- Holland's Self-Directed Search, [www.self-directed-search.com](http://www.self-directed-search.com)
- Kuder, [www.sc.kuder.com](http://www.sc.kuder.com)
- Mapping Your Future, [www.mapping-your-future.org](http://www.mapping-your-future.org)
- National Career Development Association, [www.ncda.org](http://www.ncda.org)
- O\*NET Online, [online.onetcenter.org](http://online.onetcenter.org)
- Occupational Outlook Handbook, [www.bls.gov/oco](http://www.bls.gov/oco)
- The Princeton Review, [www.review.com](http://www.review.com)
- Salary Information, [www.salary.com](http://www.salary.com)

\* Web site addresses were correct at time of publication but may have changed. If an address is no longer valid, please use an Internet search engine to locate the resource.

**Note:** Local South Carolina schools and districts may choose to use fewer career clusters, clusters that are organized differently, or clusters with alternative names.

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Find more information on Agriculture, Food, and Natural Resources education and career planning.



Career Guidance Information Sources

Check out these comprehensive sources of career and education information, which are available through your school or public libraries:

**SCOIS (South Carolina Occupational Information System)**— [www.scois.net](http://www.scois.net). An electronic database of information about careers, salaries, job requirements, educational options, scholarships, and more.

**O\*NET (Occupational Information Network)**— [online.onetcenter.org](http://online.onetcenter.org). A national occupational information database that helps students make informed decisions about education, training, career choices, and work.

**COIN (Coin Career Guidance System)**— [community.coin3.com](http://community.coin3.com). A comprehensive software program with career and college planning information, especially for South Carolina students.

**WorkKeys**— [www.workreadysc.org](http://www.workreadysc.org). A comprehensive resource for information about the South Carolina Career Readiness Certificate – how and where to qualify, as well as its value to students and the community.

**Kuder**— [sc.kuder.com](http://sc.kuder.com). A comprehensive online college and career planning system with links to government and educational information and organizations.



# Knowledge. *Pass it on.*

**Education:** It's the passing of knowledge, skills, and values from one generation to the next. So where will the next generation learn their ABCs? Or how to design sustainable buildings? Or to master foreign languages, like Spanish and Mandarin Chinese, so they can compete in a global economy? They learn from educators — people with knowledge and experience in every walk of life who make the time to share their knowledge. They learn from people like you.

Learn more at: [www.cerra.org](http://www.cerra.org).



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